11-15-06

Practitioner's Docket No. TRW(ASG)6058 **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Martin Kreuzer et al

Application No.: 10/092,871 Group No.: 3683

Filed: March 7, 2002 Examiner: P. Rodriguez

For: **DEVICE FOR DAMPING VIBRATIONS IN A STEERING WHEEL**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION—37C.F.R. 1.192)

1. Transmitted herewith, in triplicate, is the APPEAL BRIEF in this application, with respect to the Notice of Appeal filed on September 15, 2006.

NOTE: "Appellant must, within two months from the date of the notice of appeal under § 1.191 or within the time allowed for reply to the action from which the appeal was taken, if such time is later, file a brief in triplicate. . ." 37 C.F.R. § 1.192(a) (emphasis added).

2. STATUS OF APPLICANT

This application is on behalf of

☒ other than a small entity.

☐ a small entity.

A statement

☒ is attached.

☐ was already filed.

CERTIFICATION UNDER 37 CFR §§ 1.8(a) and 1.10*
(When using Express Mail, the Express Mail label number is mandatory;
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

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37 C.F.R. § 1.8(a) **37 C.F.R. § 1.10***

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Deborah Denn
Signature

Date: November 14, 2006 **Deborah Denn**
(type or print name of person certifying)

**Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.*

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. 1.17(c), the fee for filing the Appeal Brief is:

☐	small entity	$250.00
☒	other than a small entity	$500.00

Appeal Brief fee due $500.00

4. EXTENSION OF TERM

NOTE: 37 C.F.R. § 1.740(b) "...an applicant shall be deemed to have failed to engage in reasonable efforts to conclude processing or examination of an application for the cumulative total of any periods of time in excess of three months that are taken to reply to any notice or action by the Office making any rejection, objection, argument, or other request, measuring such three-month period from the date the notice or action was mailed or given to the applicant, in which case the period of adjustment set forth in § 1.703 shall be reduced by the number of days, if any, beginning on the date after the date that is three months after the date of mailing or transmission of the Office communication notifying the applicant of the rejection, objection, argument, or other request and ending on the date the reply was filed. The period, or shortened statutory period, for reply that is set in the Office action or notice has not effect on the three-month period set forth in this paragraph."

NOTE: The time periods set forth in 37 C.F.R. § 1.192(a) are subject to the provision of § 1.136 for patent applications. 37 C.F.R. § 1.191(d). See also Notice of November 5, 1985 (1060 O.G. 27).

NOTE: As the two-month period set in § 1.192(a) for filing an appeal brief is not subject to the six-month maximum period specified in 35 U.S.C. § 133, the period for filing an appeal brief may be extended up to seven months. 62 Fed. Reg. 53,131 at 53,156; 1203 O.G. 63 at 84 (Oct. 10, 1997).

The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.
(complete (a) or (b), as applicable)

(a) ☐ Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(5)) for the total number of months check below:

	Extension (months)	Fee for other than small entity	Fee for small entity
☐	one month	$ 120.00	$ 60.00
☐	two months	$ 450.00	$225.00
☐	three months	$ 1,020.00	$510.00
☐	four months	$ 1,590.00	$795.00

Fee **$** _____

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next time, if applicable)

☐ An extension for _____ months has already been secured and the fee paid therefor of $_____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request $ _____

or

(b) ☐ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

5. TOTAL FEE DUE

The total fee due is:

Appeal brief fee $500.00_____

Extension fee (if any) $ _____

TOTAL FEE DUE $500.00_____

6. FEE PAYMENT

☒ Attached is a ☒ check ☐ money order in the amount of $**500.00**_____

☒ Authorization is hereby made to charge the amount of $_____

☒ to Deposit Account No. **20-0090**.

☐ to Credit card as shown on the attached credit card information authorization form PTO-2038.

WARNING: *Credit card information should* ***not*** *be included on this form as it may become public.*

☒ Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached.

7. FEE DEFICIENCY

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to change the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986 (1065 O.G. 31-33).

☒ If any additional extension and/or fee is required,

AND/OR

☒ If any additional fee for claims is required, charge:

☒ Deposit Account No. **20-0090**.

SIGNATURE OF PRACTITIONER

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PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	Martin Kreuzer et al
Serial No.	:	10/092,871
Filing Date	:	March 7, 2002
For	:	DEVICE FOR DAMPING VIBRATIONS IN A STEERING WHEEL
Group Art Unit	:	3683
Examiner	:	P. Rodriguez
Attorney Docket No.	:	TRW(ASG)6058

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

11/15/2006 MBIZUNES 00000091 10092871
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Sir:

Following the Notice of Appeal filed September 15, 2006, Appellants present this Appeal Brief.

I. REAL PARTY IN INTEREST

The real party in interest is TRW Automotive Safety Systems GmbH & Co. KG. An assignment of this application to TRW Automotive Safety Systems GmbH & Co. KG was recorded March 7, 2002, Reel/Frame: 12679/0199.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 9-11, 16, and 18-23 are currently pending in this application. Claims 9-11, 16, 22, and 23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP document No. 05238394 to Yamada (hereinafter, Yamada) in view of DE document No. 19717692 to Pohl (hereinafter, Pohl) (see also the corresponding PG Pub application No. 2002/0185347, which is referred to in this appeal brief). Claims 18-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Pohl and further in view of RD document No. 333099 (hereinafter, RD). The rejections of claims 9-11, 16, and 18-23 are appealed.

IV. STATUS OF AMENDMENTS

A Response After Final Rejection was filed on August 18, 2006. In the response, claims 9, 10, and 16 were amended. An Advisory Action dated November 23, 2005 indicated that that the Response After Final Rejection was entered. The Advisory Action maintained the rejection of claims 9-11, 16, and 18-23.

V. SUMMARY OF THE INVENTION

The invention of claim 9 relates to an assembly comprising a steering wheel 10 and a vibration damping device 20 for damping vibrations of the steering wheel

10. (Page 4, lines 23 to Page 5, line 3 and Page 8, lines 24-25). The vibration damping device 20 comprises a damping unit 22 including a hollow damping body 36 arranged in the steering wheel 10. (Page 8, lines 4-5 and Page 8, line 28 to Page 9, line 1). A mass core 40 (Figs. 4 and 5) acting as an attenuation mass is arranged inside the hollow damping body 36. (Page 8, lines 24-26). An electrical control unit 26 is coupled with the damping unit. (Page 5, lines 6-7). The electrical control unit 26 being able to alter the vibration frequency of the damping unit 22 such that different vibration frequencies can be damped. (Page 6, lines 1-9).

The invention of claim 10 relates to an assembly comprising a steering wheel 10 and a vibration damping device 20 for damping vibrations of the steering wheel 10. (Page 4, lines 23 to Page 5, line 3 and Page 8, lines 24-25). The vibration damping device 20 comprises a damping unit 22 including a hollow damping body 36 made of an elastic material arranged in the steering wheel 10. (Page 8, lines 4-5 and Page 8, line 28 to Page 9, line 1). A mass core 40 (Figs. 4 and 5) acting as an attenuation mass is arranged inside the hollow damping body 36. (Page 8, lines 24-26). An electrical control unit 26 is coupled with the damping unit. (Page 5, lines 6-7). The electrical control unit 26 being able to alter the vibration frequency of the damping unit 22 such that different vibration frequencies can be damped. (Page 6, lines 1-9).

The invention of claim 16 relates to an assembly comprising a steering wheel 10 and a vibration damping device 20 for damping vibrations of the steering wheel 10. (Page 4, lines 23 to Page 5, line 3 and Page 8, lines 24-25). The vibration damping device 20 comprises a damping unit 22 including a hollow damping body 36 arranged in the steering wheel 10. (Page 8, lines 4-5 and Page 8, line 28 to Page 9,

line 1). A mass core 40 (Figs. 4 and 5) acting as an attenuation mass is arranged inside the hollow damping body 36. (Page 8, lines 24-26). An electrical control unit 26 is coupled with the damping unit. (Page 5, lines 6-7). The electrical control unit 26 being able to alter the vibration frequency of the damping unit 22 such that different vibration frequencies can be damped. (Page 6, lines 1-9). The hollow damping body 36 contains one of an electrorheological fluid and magnetorheological fluid. (Page 8, lines 26-28).

VI. ISSUES

a. Whether the rejection of claims 9-11, 16, 22, and 23 under 35 U.S.C. § 103 as being obvious over Yamada in view of Pohl is proper.

b. Whether the rejection of claims 18-21 under 35 U.S.C. § 103 as being obvious over Yamada in view of Pohl and further in view of RD is proper.

VII. ARGUMENTS

The M.P.E.P. sets forth the criteria for a rejection for obviousness as follows:

> To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

See, M.P.E.P. § 706.02(j) *citing* In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

A. Claims 9, 11, 16, 22, and 23

Claims 9, 11, 16, 22, and 23 stand rejected as being obvious under 35 U.S.C. §103 over Yamada in view of Pohl. It is respectfully submitted that the rejection of claims 9, 11, 16, 22, and 23 over the combination of Yamada and Pohl should be reversed for at least the following reasons:

1. **There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings of Yamada and Pohl.**

There is no suggestion or motivation to modify Yamada with the teachings of Pohl. Yamada discloses a damping device 7 with an iron damper mass 8 and a rubber foot 10 that is mounted in the interior of a horn pad 6 of a steering wheel. The damping device 7 is switched ON when the engine is idling and switched off when the vehicle is moving. In particular, when the vehicle is moving, electromagnets 18 on the headlining section 16 of the horn pad are energized to bring the damper mass 8 into contact with them, so that the damper mass 8 is fixed. When the vehicle is idling, electromagnets 17 on the bottom plate of the horn pad 6 are energized to separate the damper mass from the electromagnets 18 and allow the damper mass to swing or rock to reduce the vibration of the steering wheel 2.

Pohl discloses a spring/mass vibratory force coupler that couples masses to a reference mass 12. The spring/mass vibratory coupler comprises a vibratory mass 11, a damper 111 and two springs 17, 18 (see paragraph [0012]). Referring to Fig. 3, the damper 111 is in the form of an ERF coupling element 110 or 111. A housing 31 is connected to a lug 313 for the attachment of the springs 17 or 18 and encloses the ERF 311 and the piston 33, which plunges into the ERF 311. The piston 33 is connected to the piston rod 32, which is attached to the vibratory mass

11. When electrical voltage is applied to the electrode 35 opposite the housing 31, the viscosity of the ERF 311 in the electrode gap 36 is increased and a damped or rigid coupling of the spring 17 or 18 to the vibratory mass 11 is made possible.

There is nothing in Yamada or Pohl, or in the knowledge of one of ordinary skill in the art to suggest combining the reference teachings of Yamada and Pohl as proposed in the rejection of claims 9, 11, 16, 22, and 23. Pohl discloses that the spring/mass vibratory force coupler can be used in machines of all kinds but none of the machines mentioned in Pohl is even remotely related to a steering wheel. The office action merely states that it would be obvious to one of ordinary skill in the art at the time the invention was made to substitute the damper of Pohl for the damper assembly of Yamada as an alternate means of damping the steering wheel, and that an electrorheological type of damping means would allow for variable damping, electrically adjustable spring characteristics and electrically adjustable variable natural frequencies to provide better overall damping to the steering wheel.

However, one of ordinary skilled in the art would recognize that there is no need to substitute the damping device 7 of Yamada with the damper element 111 of Pohl. The damper element 111 in Pohl is one element of the spring/mass vibratory force coupler that is merely designed to make a rigid or damped coupling. The damping device 7 of Yamada does not perform any coupling function. On the contrary, the damper mass 8 of Yamada is designed to separate from the electromagnetic elements 18 within the horn pad 6 and also rock when the damping unit 7 operates.

It is respectfully suggested that the combination of Yamada and Pohl only seems plausible after having the benefit of the Applicants' disclosure. The use of the teachings of the present invention to find obviousness is impermissible.

> The court must be ever alert not to read obviousness into an invention on the basis of applicant's own statements; that is, we must view the prior art without reading into that art applicant's teachings. The issue, then, is whether the teachings of the prior art would, in and of themselves and without the benefits of appellant's disclosure, make the invention as a whole obvious.

In Re Sponnoble, 160 USPQ 237 at 243 (CCPA 1969) (emphasis in original).

Accordingly, the Examiner must consider only the teachings of the prior art references. Without the teachings of the present invention, one of ordinary skill in the art would not even consider combining the teachings of Yamada and Pohl.

Yamada describes damping vibration of a steering wheel only when the engine is idling and the vehicle is not moving. Pohl does not describe or suggest damping vibration of a steering wheel. Thus, neither Yamada nor Pohl describes or suggests variable damping of a steering wheel, electrically adjustable spring characteristics in a steering wheel, or electrically adjustable natural frequencies in a steering wheel. Accordingly, it appears the Examiner is using the teachings of the present invention to combine the teachings of Yamada and Pohl, which is impermissible.

Thus, for the reasons set forth above, the rejection of claims 9, 11, 16, 22, and 23 under 35 U.S.C. 103(a) fails to establish a prima facie case for obviousness, because there is no motivation in the reference or in the knowledge generally available to one of ordinary skill in the art to combine the reference teachings of Yamada and Pohl as suggested by the examiner. Therefore, it is respectfully

suggested that the rejection of claims 9, 11, 16, 22, and 23 as obvious over Yamada in view of Pohl is improper and should be reversed.

2. There is not a reasonable expectation of success to combine the reference teachings of Yamada and Pohl.

Further, there is not a reasonable expectation of success of combining the teachings of Pohl with Yamada. As previously mentioned, the damper element 111 of Pohl is designed to couple the spring 17 or 18 and reference mass 12 to the vibratory mass 11. As depicted in Fig. 1, the piston rod 22 is connected to the vibratory mass 11. The damper element of Pohl is designed to be permanently attached to the masses and not rock. By contrast, the horn pad 16 of Yamada is specifically designed to have a damper mass 8 be disconnected and spaced from the head-lining section 16 so that the damper mass 8 is allowed to rock or swing to reduce the vibration of the steering wheel 2. Hence, if the damper element of Pohl is incorporated into Yamada, the damper element would not disengage from the electromagnets 18 and rock. The use of the damper element of Pohl would adversely affect the principle operation of Yamada.

In fact, the office action does not indicate how the damper element of Pohl could be incorporated into Yamada. Pohl discloses a coupler with ER fluid. Yet, Yamada has a damper that damps vibrations of a steering wheel by swinging. It is not certain how the coupler of Pohl could be successfully incorporated in the horn pad 6 of Yamada to provide damping.

Further, the damper unit of Pohl is large compared with the damper of Yamada and possibly would not fit in the horn pad 6. In fact, in order to combine Yamada and Pohl, one of ordinary skilled in the art would need to use Pohl's

vibratory force coupler in its complete form as shown in Fig. 1, which includes the mass 11 arranged outside the hollow damping body and the springs 17, 18. Yet, there is not enough room in the horn pad 6 of Yamada to accommodate all of the elements of the vibratory force coupler of Pohl. Thus, for the reasons set forth above, the proposed combination of Yamada and Pohl fails to establish a prima facie case of obviousness, because there is not a reasonable expectation of success of combining the teachings of Yamada with Pohl. Therefore, it is respectfully suggested that the rejection of claims 9, 11, 16, 22, and 23 as obvious over Yamada in view of Pohl is improper and should be reversed.

3. A combination of Yamada and Pohl fails to teach or suggest all of the claim limitations of either claims 9, 11, 16, 22, or 23.

The proposed combination of Yamada and Pohl does not teach or suggest all of the claim limitations of either claim 9, 11, 16, 22, or 23. In particular, neither Yamada nor Pohl taken alone or in combination teach or suggest an electrical control unit coupled with the damping unit that is able to alter the vibration frequency of the damping unit such that different vibration frequencies can be damped. The Examiner cites column 3 and the bottom 4 lines of paragraph [0037] in Pohl to show that Pohl discloses such an electrical control unit coupled with the damping unit. However, this portion of the specification discloses that damped or rigid coupling of the spring to the vibratory mass is made possible, when a voltage is applied to change the viscosity of the ERF 311. Pohl does not disclose an electrical control unit coupled with the damping unit that is able to alter the vibration frequency of the damping unit such that different vibration frequencies can be damped. No damping per se of different vibration frequencies is achieved by the coupling element of Pohl.

Thus, the proposed combination of Yamada and Pohl fails to establish a prima facie case of obviousness, because the proposed combination of Yamada and Pohl does not teach or suggest all of the claim limitations of claims 9, 11, 16, 22, or 23. Therefore, it is respectfully suggested that the rejection of claims 9, 11, 16, 22, and 23 as obvious over Yamada in view of Pohl is improper and should be reversed.

B. Claim 10

Claim 10 stands rejected as being obvious under 35 U.S.C. §103 over Yamada in view of Pohl. It is respectfully submitted that the rejection of claim 10 is improper and should be reversed for at least the following reasons:

1. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings of Yamada and Pohl.

There is no suggestion or motivation to modify Yamada with the teachings of Pohl. Yamada discloses a damping device 7 with an iron damper mass 8 and a rubber foot 10 that is mounted in the interior of a horn pad 6 of a steering wheel. The damping device 7 is switched ON when the engine is idling and switched off when the vehicle is moving. In particular, when the vehicle is moving, electromagnets 18 on the headlining section 16 of the horn pad are energized to bring the damper mass 8 into contact with them, so that the damper mass 8 is fixed. When the vehicle is idling, electromagnets 17 on the bottom plate of the horn pad 6 are energized to separate the damper mass from the electromagnets 18 and allow the damper mass to swing or rock to reduce the vibration of the steering wheel 2.

Pohl discloses a spring/mass vibratory force coupler that couples masses to a reference mass 12. The spring/mass vibratory coupler comprises a vibratory

mass 11, a damper 111 and two springs 17, 18 (see paragraph [0012]). Referring to Fig. 3, the damper 111 is in the form of an ERF coupling element 110 or 111. A housing 31 is connected to a lug 313 for the attachment of the springs 17 or 18 and encloses the ERF 311 and the piston 33, which plunges into the ERF 311. The piston 33 is connected to the piston rod 32, which is attached to the vibratory mass 11. When electrical voltage is applied to the electrode 35 opposite the housing 31, the viscosity of the ERF 311 in the electrode gap 36 is increased and a damped or rigid coupling of the spring 17 or 18 to the vibratory mass 11 is made possible.

There is nothing in Yamada or Pohl, or in the knowledge of one of ordinary skill in the art to suggest combining the reference teachings of Yamada and Pohl as proposed in the rejection of claim 10. Pohl discloses that the spring/mass vibratory force coupler can be used in machines of all kinds but none of the machines mentioned in Pohl is even remotely related to a steering wheel. The office action merely states that it would be obvious to one of ordinary skill in the art at the time the invention was made to substitute the damper of Pohl for the damper assembly of Yamada as an alternate means of damping the steering wheel, and that an electrorheological type of damping means would allow for variable damping, electrically adjustable spring characteristics and electrically adjustable variable natural frequencies to provide better overall damping to the steering wheel.

However, one of ordinary skilled in the art would recognize that there is no need to substitute the damping device 7 of Yamada with the damper element 111 of Pohl. The damper element 111 in Pohl is one element of the spring/mass vibratory force coupler that is merely designed to make a rigid or damped coupling. The damping device 7 of Yamada does not perform any coupling function. On the

contrary, the damper mass 8 of Yamada is designed to separate from the electromagnetic elements 18 within the horn pad 6 and also rock when the damping unit 7 operates.

It is respectfully suggested that the combination of Yamada and Pohl only seems plausible after having the benefit of the Applicants' disclosure. The use of the teachings of the present invention to find obviousness is impermissible.

> The court must be ever alert not to read obviousness into an invention on the basis of applicant's own statements; that is, we must view the prior art without reading into that art applicant's teachings. The issue, then, is whether the teachings of the prior art would, in and of themselves and without the benefits of appellant's disclosure, make the invention as a whole obvious.

In Re Sponnoble, 160 USPQ 237 at 243 (CCPA 1969) (emphasis in original).

Accordingly, the Examiner must consider only the teachings of the prior art references. Without the teachings of the present invention, one of ordinary skill in the art would not even consider combining the teachings of Yamada and Pohl.

Yamada describes damping vibration of a steering wheel only when the engine is idling and the vehicle is not moving. Pohl does not describe or suggest damping vibration of a steering wheel. Thus, neither Yamada nor Pohl describes or suggests variable damping of a steering wheel, electrically adjustable spring characteristics in a steering wheel, or electrically adjustable natural frequencies in a steering wheel. Accordingly, it appears the Examiner is using the teachings of the present invention to combine the teachings of Yamada and Pohl, which is impermissible.

Thus, for the reasons set forth above, the rejection of claim 10 under 35 U.S.C. 103(a) fails to establish a prima facie case for obviousness, because there is

no motivation in the reference or in the knowledge generally available to one of ordinary skill in the art to combine the reference teachings of Yamada and Pohl as suggested by the examiner. Therefore, it is respectfully suggested that the rejection of claim 10 as obvious over Yamada in view of Pohl is improper and should be reversed.

2. There is not a reasonable expectation of success to combine the reference teachings of Yamada and Pohl.

Further, there is not a reasonable expectation of success of combining the teachings of Pohl with Yamada. As previously mentioned, the damper element 111 of Pohl is designed to couple the spring 17 or 18 and reference mass 12 to the vibratory mass 11. As depicted in Fig. 1, the piston rod 22 is connected to the vibratory mass 11. The damper element of Pohl is designed to be permanently attached to the masses and not rock. By contrast, the horn pad 16 of Yamada is specifically designed to have a damper mass 8 be disconnected and spaced from the head-lining section 16 so that the damper mass 8 is allowed to rock or swing to reduce the vibration of the steering wheel 2. Hence, if the damper element of Pohl is incorporated into Yamada, the damper element would not disengage from the electromagnets 18 and rock. The use of the damper element of Pohl would adversely affect the principle operation of Yamada.

In fact, the office action does not indicate how the damper element of Pohl could be incorporated into Yamada. Pohl discloses a coupler with ER fluid. Yet, Yamada has a damper that damps vibrations of a steering wheel by swinging. It is not certain how the coupler of Pohl could be successfully incorporated in the horn pad 6 of Yamada to provide damping.

Further, the damper unit of Pohl is large compared with the damper of Yamada and possibly would not fit in the horn pad 6. In fact, in order to combine Yamada and Pohl, one of ordinary skilled in the art would need to use Pohl's vibratory force coupler in its complete form as shown in Fig. 1, which includes the mass 11 arranged outside the hollow damping body and the springs 17, 18. Yet, there is not enough room in the horn pad 6 of Yamada to accommodate all of the elements of the vibratory force coupler of Pohl. Thus, for the reasons set forth above, the proposed combination of Yamada and Pohl fails to establish a prima facie case of obviousness, because there is not a reasonable expectation of success of combining the teachings of Yamada with Pohl. Therefore, it is respectfully suggested that the rejection of claim 10 as obvious over Yamada in view of Pohl is improper and should be reversed.

3. A combination of Yamada and Pohl fails to teach or suggest all of the claim limitations of claim 10.

The proposed combination of Yamada and Pohl does not teach or suggest all of the claim limitations of claim 10. In particular, neither Yamada nor Pohl taken alone or in combination teach or suggest an electrical control unit coupled with the damping unit that is able to alter the vibration frequency of the damping unit such that different vibration frequencies can be damped. The Examiner cites column 3 and the bottom 4 lines of paragraph [0037] in Pohl to show that Pohl discloses such an electrical control unit coupled with the damping unit. However, this portion of the specification discloses that damped or rigid coupling of the spring to the vibratory mass is made possible, when a voltage is applied to change the viscosity of the ERF 311. Pohl does not disclose an electrical control unit coupled with the damping unit

that is able to alter the vibration frequency of the damping unit such that different vibration frequencies can be damped. No damping per se of different vibration frequencies is achieved by the coupling element of Pohl.

Also, neither Yamada nor Pohl taken alone or in combination disclose or suggest that the damping unit includes a hollow damping body made of an elastic material. For the proper functioning of the damper element of Pohl, the outer housing 31 of the damper element must be rigid. Otherwise, the resistance of the electrorheological fluid to the movement of the piston could not be adjusted with any precision to tune the damping. The hatching on the drawings of Pohl indicate that the material is metal, which is generally rigid.

The Examiner alleges that housing 31 of Pohl inherently has some elasticity. However, metal is generally considered to be rigid and not made of an elastic material. Clearly, the housing 31 of Pohl does not have the properties of being not rigid, flexible, capable of ready change or easy expansion under the Examiner's definition of the term "elastic".

Further, under the doctrine of inherency, if an element is not expressly disclosed in a prior art reference, the reference will still be deemed to include the missing element if the missing element is "necessarily present" in the item described in the reference. Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). "Necessarily present" for inherency means more than merely probably or possibly present. Trintec Industries, Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295 (Fed. Cir. 2002). The Examiner states that "The damping element 31 of Pohl could possess any of these features and thus is still readable on this claim limitation". The applicant respectfully disagrees. The fact that the

damping element 31 could possess any of the features as being elastic as mentioned does not mean that housing 31 of Pohl is inherently made of elastic material. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

Thus, the proposed combination of Yamada and Pohl fails to establish a prima facie case of obviousness, because the proposed combination of Yamada and Pohl does not teach or suggest all of the claim limitations of 10. Therefore, it is respectfully suggested that the rejection of claim 10 as obvious over Yamada in view of Pohl is improper and should be reversed.

C. Claim 18

Claim 18 stands rejected under 35 U.S.C. 103 as being obvious over Yamada in view of Pohl and further in view of RD. The rejection of claim 18, which depends from claim 16, should be reversed for the same reasons as claim 16 and also for at least the following reasons:

1. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings of Yamada and Pohl with RD.

There is no suggestion or motivation to modify Yamada and Pohl with the teachings of RD. There is nothing in Yamada or Pohl or RD, or in the knowledge of one of ordinary skill in the art to suggest combining the reference teachings of Yamada, Pohl, and RD as proposed in the rejection of claim 18. The office action merely states that "It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the damper assembly of Yamada,

as modified, to include a sensor as taught by the RD '099 document as an additional means of regulating damping. Providing a sensor would enable better overall control of the damping factoring in other conditions of the vehicle at the time damping is needed." However, one of ordinary skilled in the art would recognize that there is no need to include the teachings of RD into the damper assembly of Yamada as modified by Pohl in the manner taught by RD. RD merely teaches a controller 4 that provides a variable amount of damping to a steering system based upon current road and driving conditions. RD only discloses inputs to the controller that could consist of the vehicle speed and also the degree and rate of the turn just performed.

Further, the damper of Yamada only operates when the engine is idling and the vehicle is not moving. Thus, there is no desirability to modify Yamada to include the controller 4 having inputs related to the current road and driving conditions of RD, since these inputs are used when the vehicle is moving. Also, RD describes providing a driver with a desirable steering feel and return of the steering wheel at completion of a turn. RD does not describe or suggest damping vibrations of a steering wheel.

It is respectfully suggested that the combination of Yamada, Pohl, and RD only seems plausible after having the benefit of the Applicants' disclosure, which is impermissible. Without the teachings of the present invention, one of ordinary skill in the art would not even consider combining the teachings of Yamada, Pohl, and RD to attempt to arrive at the presently claimed invention. Thus, for the reasons set forth above, the rejection of claim 18 under 35 U.S.C. 103(a) fails to establish a prima facie case for obviousness, because there is no motivation in the reference or in the knowledge generally available to one of ordinary skill in the art to combine the

reference teachings of Yamada, Pohl and RD as suggested by the examiner. Therefore, it is respectfully suggested that the rejection of claim 18 as being obvious over Yamada in view of Pohl and further in view of RD is improper and should be reversed.

2. A Combination of Yamada, Pohl, and RD fails to teach or suggest all of the claim limitations of claim 18.

The proposed combination of Yamada, Pohl, and RD does not teach or suggest all of the claim limitations of claim 18. In particular, neither Yamada nor Pohl nor RD taken alone or in combination discloses or suggests a sensor that senses the vibration frequency of the steering wheel. Further, neither Yamada nor Pohl nor RD taken alone or in combination discloses or suggests a sensor that provides a variable output signal depending upon the vibration frequency of the steering wheel. Moreover, neither Yamada nor Pohl nor RD taken alone or in combination discloses or suggests a control unit responsive to the variable output signal that changes mechanical vibration characteristics of the vibration damping device such that different vibration frequencies can be damped based on the present vibration frequency of the steering wheel.

Yamada modified by Pohl as suggested by the Examiner does not disclose the sensor and control unit claimed in claim 18. This is also admitted by the Examiner. The RD reference merely discloses inputs to the controller 4 that consist of the vehicle's speed and also the degree and rate of the turn just performed. RD only discloses that these parameters are used to activate the controller to control the torsional damper of RD to provide the driver with the desirable steering feel and predictable return of the steering wheel to the "on-center" position at completion of

the turn. RD fails to disclose that the vehicle speed and rate and degree of turn are related in any way to the vibrational parameters of the steering wheel. In fact, RD does not even disclose a sensor.

Thus, the proposed combination of Yamada, Pohl and RD fails to establish a prima facie case of obviousness, because the proposed combination of Yamada, Pohl and RD does not teach or suggest all of the claim limitations of claim 18. Therefore, it is respectfully suggested that the rejection of claim 18 as obvious over Yamada in view of Pohl and further in view of RD is improper and should be reversed.

D. Claims 19 and 21

Claims 19 and 21 stand rejected under 35 U.S.C. § 103 as being obvious over Yamada in view of Pohl and further in view of RD. The rejection of claims 19 and 21, which depend from claim 9, should be reversed for the same reasons as claim 9 and also for at least the following reasons:

1. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings of Yamada and Pohl with RD.

There is no suggestion or motivation to modify Yamada and Pohl with the teachings of RD. There is nothing in Yamada or Pohl or RD, or in the knowledge of one of ordinary skill in the art to suggest combining the reference teachings of Yamada and Pohl and RD as proposed in the rejection of claims 19 and 21. The office action merely states that "It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the damper assembly of Yamada, as modified, to include a sensor as taught by the RD '099 document as

an additional means of regulating damping. Providing a sensor would enable better overall control of the damping factoring in other conditions of the vehicle at the time damping is needed." However, one of ordinary skilled in the art would recognize that there is no need to include the teachings of RD into the damper assembly of Yamada as modified by Pohl in the manner taught by RD. RD merely teaches a controller 4 that provides a variable amount of damping to a steering system based upon current road and driving conditions. RD only discloses inputs to the controller that could consist of the vehicles speed and also the degree and rate of the turn just performed.

Further, the damper of Yamada only operates when the engine is idling and the vehicle is not moving. Thus, there is no desirability to modify Yamada to include the controller 4 having inputs related to the current road and driving conditions of RD, since these inputs are used when the vehicle is moving. Also, RD describes providing a driver with a desirable steering feel and return of the steering wheel at completion of a turn. RD does not describe or suggest damping vibrations of a steering wheel.

It is respectfully suggested that the combination of Yamada, Pohl, and RD only seems plausible after having the benefit of the Applicants' disclosure, which is impermissible. Thus, for the reasons set forth above, the rejection of claims 19 and 21 under 35 U.S.C. 103(a) fails to establish a prima facie case for obviousness, because there is no motivation in the reference or in the knowledge generally available to one of ordinary skill in the art to combine the reference teachings of Yamada, Pohl, and RD as suggested by the examiner. Therefore, it is respectfully

suggested that the rejection of claims 19 and 21 as being obvious over Yamada in view of Pohl and further in view of RD is improper and should be reversed.

2. A combination of Yamada, Pohl and RD fails to teach or suggest all of the claim limitations of either claims 19 or 21.

The proposed combination of Yamada, Pohl, and RD does not teach or suggest all of the claim limitations of either claims 19 or 21. In particular, neither Yamada nor Pohl nor RD taken alone or in combination discloses or suggests a sensor that senses the vibration frequency of the steering wheel. Further, neither Yamada nor Pohl nor RD taken alone or in combination discloses or suggests a sensor that provides a variable output signal depending upon the vibration frequency of the steering wheel. Moreover, neither Yamada nor Pohl nor RD taken alone or in combination discloses or suggests a control unit responsive to the variable output signal that changes mechanical vibration characteristics of the vibration damping device such that different vibration frequencies can be damped based on the present vibration frequency of the steering wheel.

Yamada modified by Pohl as suggested by the Examiner does not disclose the sensor and control unit claimed in claims 19 and 21. This is also admitted by the Examiner. The RD reference merely discloses inputs to the controller 4 that consist of the vehicles' speed and also the degree and rate of the turn just performed. RD only discloses that these parameters are used to activate the controller to control the torsional damper of RD to provide the driver with the desirable steering feel and predictable return of the steering wheel to the "on-center" position at completion of the turn. RD fails to disclose that the vehicle speed and rate and degree of turn are

related in any way to the vibrational parameters of the steering wheel. In fact, RD does not even disclose a sensor.

Thus, the proposed combination of Yamada, Pohl and RD fails to establish a prima facie case of obviousness, because the proposed combination of Yamada, Pohl and RD does not teach or suggest all of the claim limitations of either claim 19 or 21. Therefore, it is respectfully suggested that the rejection of claims 19 and 21 as obvious over Yamada in view of Pohl and further in view of RD is improper and should be reversed.

E. Claim 20

The rejection of claim 20, which depends from claim 19, should be reversed for the same reasons as claim 19 and also for at least the following reason:

1. A combination of Yamada, Pohl and RD fails to teach or suggest all of the claim limitations of claim 20.

The proposed combination of Yamada, Pohl, and RD does not teach or suggest all of the claim limitations of claim 20. In particular, neither Yamada nor Pohl nor RD taken alone or in combination disclose or suggest that the damping unit includes a hollow damping body made of an elastic material. For the proper functioning of the damper element of Pohl, the outer housing of the damper element must be rigid. Otherwise, the resistance of the electrorheological fluid to the movement of the piston could not be adjusted with any precision to tune the damping. The hatching on the drawings of Pohl indicate that the material is metal, which is generally rigid.

The Examiner alleges that housing 31 of Pohl inherently has some elasticity. However, metal is generally considered to be rigid and not made of an elastic

material. Clearly, the housing 31 of Pohl does not have the properties of being not rigid, flexible, capable of ready change or easy expansion under the Examiner's definition of the term "elastic".

Further, under the doctrine of inherency, if an element is not expressly disclosed in a prior art reference, the reference will still be deemed to include the missing element if the missing element is "necessarily present" in the item described in the reference. Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). "Necessarily present" for inherency means more than merely probably or possibly present. Trintec Industries, Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295 (Fed. Cir. 2002). The Examiner states that "The damping element 31 of Pohl could possess any of these features and thus is still readable on this claim limitation". The applicant respectfully disagrees. The fact that the damping element 31 could possess any of the features as being elastic as mentioned does not mean that housing 31 of Pohl is inherently made of elastic material. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

Thus, the proposed combination of Yamada, Pohl, and RD fails to establish a prima facie case of obviousness, because the proposed combination of Yamada, Pohl, and RD does not teach or suggest all of the claim limitations of claim 20. Therefore, it is respectfully suggested that the rejection of claim 20 as obvious over Yamada in view of Pohl and further in view of RD is improper and should be reversed.

F. Conclusion

In view of the foregoing, Appellants respectfully submit that the rejection of claims 9-11, 16, and 18-23 should be reversed. Reversal of the rejections of claims 9-11, 16, and 18-23 is respectfully requested.

VIII. CLAIM APPENDIX

Appendix A attached contains a copy of the claims on appeal.

IX. EVIDENCE APPENDIX

There was no evidence relied upon in this brief that was submitted under 37 C.F.R. §§1.130-1.132, or otherwise submitted and entered into the record by the Examiner.

X. RELATED PROCEEDING APPENDIX

There are no related appeals, interferences, or judicial procedures under 37 C.F.R. §41.37(1)(c)(ii).

Please charge any deficiency or credit any overpayment in the fees for this Appeal Brief to Deposit Account No. 20-0090.

Respectfully submitted,

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APPENDIX A

Claims 1-8 (Canceled)

Claim 9 (Previously Presented): An assembly comprising a steering wheel and a vibration damping device for damping vibrations of said steering wheel, said vibration damping device comprising:

a damping unit including a hollow damping body arranged in said steering wheel,

a mass core acting as an attenuation mass arranged inside said hollow damping body, and

an electrical control unit coupled with said damping unit, said electrical control unit being able to alter the vibration frequency of said damping unit such that different vibration frequencies can be damped.

Claim 10 (Previously Presented): An assembly comprising a steering wheel and a vibration damping device for damping vibrations of said steering wheel, said vibration damping device comprising:

a damping unit including a hollow damping body made of an elastic material and arranged in said steering wheel,

a mass core acting as an attenuation mass arranged inside said hollow damping body, and

an electrical control unit coupled with said damping unit, said electrical control unit being able to alter the vibration frequency of said damping unit such that different vibration frequencies can be damped.

Claim 11 (Previously Presented): The assembly according to claim 9, wherein said hollow damping body is ring-shaped.

Claims 12-15 (Canceled)

Claim 16 (Previously Presented): An assembly comprising a steering wheel and a vibration damping device for damping vibrations of said steering wheel, said vibration damping device comprising:

a damping unit including a hollow damping body arranged in said steering wheel,

a mass core acting as an attenuation mass arranged inside said hollow damping body, and

an electrical control unit coupled with said damping unit, said electrical control unit being able to alter the vibration frequency of said damping unit such that different vibration frequencies can be damped,

said hollow damping body containing one of an electrorheological fluid and a magnetorheological fluid.

Claim 17 (Canceled)

Claim 18 (Previously Presented): The assembly according to claim 16 including a sensor for sensing the vibration frequency of the steering wheel and providing a variable output signal depending upon the vibration frequency, and wherein said control unit, after actuation of said damping unit, in response to said

variable output signal of said sensor changing mechanical vibration characteristics of said device such that different vibration frequencies can be damped based on the present vibration frequency of the steering wheel.

Claim 19 (Previously Presented): The assembly according to claim 9 including a sensor for sensing the vibration frequency of the steering wheel and providing a variable output signal depending upon the vibration frequency, and wherein said control unit, after actuation of said damping unit, in response to said variable output signal of said sensor changing mechanical vibration characteristics of said device such that different vibration frequencies can be damped based on the present vibration frequency of the steering wheel.

Claim 20 (Previously Presented): The assembly according to claim 19, wherein said hollow damping body is made of an elastic material.

Claim 21 (Previously Presented): The assembly according to claim 19, wherein said hollow damping body is ring-shaped.

Claim 22 (Previously Presented): The assembly according to claim 16 wherein said mass core is entirely surrounded by said one of an electrorheological fluid and a magnetorheological fluid.

Claim 23 (Previously Presented): The assembly according to claim 9 wherein said mass core is entirely arranged inside said hollow damping body.

EVIDENCE APPENDIX

There was no evidence relied upon in this brief that was submitted under 37 C.F.R. §§1.130-1.132, or otherwise submitted and entered into the record by the Examiner.

RELATED PROCEEDINGS APPENDIX

There are no related appeals, interferences, or judicial procedures under 37 C.F.R. §41.37(1)(c)(ii).